DOCUMENT RESUME

ED 115 600 SP 009 669

AUTHOR Orlich, Donald C.; And Others
TITLE Sources of Information About New Social Studies and Science Programs Used by Washington Elementary School Principals.
INSTITUTION Washington State Univ., Pullman. Coll. of Education.
PUB DATE Nov 75
NOTE 45p.

EDRS PRICE MF-$0.76 HC-$1.95 Plus Postage
DESCRIPTORS Elementary Education; *Elementary School Science; *Information Sources; Merchandising; *Principals; Questionnaires; *Sales Workers; *Social Studies; Textbooks

ABSTRACT

This study was designed to determine if the conclusion of Ruff and Orlich that textbook salesperson were the primary source of information about elementary social studies for Washington elementary principals would be substantiated through replication. In addition, the investigation sought information on several pertinent variables not available in the original instrument (e.g., size of school district and participation in national workshops). Questionnaires were mailed to 301 elementary school principals in the state of Washington. The instruments were used to obtain information regarding the best sources of information for social studies, as well as for elementary school science. Results indicated that (1) publishers were still the single most frequently mentioned "best source" of information; (2) curriculum coordinators' and other district resources were important sources of information in larger school districts; (3) conferences and workshops were identified as important informational sources by respondents who attended them; and (4) generally, the larger the school district, the smaller the number of trips reported taken by the respondent, and vice versa. (The cover letter to principals, the survey instrument used, questionnaire formats, and suggested instruments for both social studies and science information are appended.) (PB)

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SOURCES OF INFORMATION ABOUT NEW SOCIAL STUDIES AND SCIENCE PROGRAMS USED BY WASHINGTON ELEMENTARY SCHOOL PRINCIPALS

by

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The material reported herein was performed pursuant to a grant from the Research Fund of the College of Education at Washington State University. Investigators undertaking such projects are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent the official position or policy of the College of Education or Washington State University.

Washington State University
College of Education
Office of Field and Research Services
Pullman, Washington 99163
November, 1975

SP009 669

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Acknowledgments

We wish to acknowledge Dr. Jack Frisk, Deputy State Superintendent, Office of the State Superintendent of Public Instruction, Olympia, for his assistance in providing the listings used in this study. A special note of appreciation goes to all the Washington elementary school principals who responded to the survey. Bienvenida Pfeifer provided the secretarial assistance for the project and typed the manuscripts and camera-ready copy for printing. The Duplicating and Mailing Services at Washington State University printed and bound the report.

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SOURCES OF INFORMATION ABOUT NEW SOCIAL STUDIES AND SCIENCE PROGRAMS USED BY WASHINGTON ELEMENTARY SCHOOL PRINCIPALS

Purpose for this Study

How do educational leaders find out about innovations in the field? Much has been written about innovations, but very few have conducted research to determine how elementary school principals learn of new programs. Thus, the present study was undertaken primarily to determine if the Ruff-Orlich conclusions which were published in the Elementary School Journal of April, 1974 (8) that textbook salespersons were the "best source" of innovation about new programs would be substantiated through replication. In addition, the study sought information on several pertinent variables not available in the previous one--e.g., size of school district and length of service as a principal (12).

Objectives. The objectives of this study were to:

1. determine the best sources of information about new programs in social studies and science used by selected Washington elementary school principals in 1975.
2. compare the findings obtained in 1975 with the results of a similar survey conducted by Thomas F. Ruff in 1970-71 with the same group (8).

Need for replication. When the Ruff-Orlich paper (8) was published in April, 1974, by The Elementary School Journal, it was condensed and

reprinted in The Education Digest, October, 1974, and subsequently abstracted in Education, U.S.A., December 30, 1974. With such wide dissemination of the results the authors received written inquiries from Australia, Canada, Africa and the U.S.A. These included, among others, letters from The Ford Foundation, Multi-Media Division of the Life-Time Corporation, The Department of Communications of Florida State University, The Director for the Study of Information in Education at Syracuse University, other school districts, universities, colleges and state departments of education. Further, Dr. Arthur Sheekey of the Office of the Deputy Commissioner for School Systems of the U.S. Office of Education, personally telephoned the authors to obtain additional information concerning the consequences of the study. Dr. Michael Frodyma, Acting Head, Instructional Improvement Implementation Section, Division of Pre-College Education in Science of the National Science Foundation encouraged one of the authors in a personal meeting to replicate the study to determine if elementary school science sources were similar to those of elementary school social studies.

It appeared that with such reactions a replication study should be accomplished to test the hypothesis that textbook salespersons were the best sources of information about new elementary school social studies programs (12).

Background of Problem

One of the most frequently written phrases used to describe elementary school principals is "instructional leader"--a projected role intended to replace whatever it is principals are now doing. "Instructional leadership" was a major theme of a recent series of articles on the principalship published under the general title, "Chataqua '74: The Remaking of the Principalship" (1).

Inherent in the role of instructional leader are administrative descriptors that the principal is "manager of change" or "promoter of innovation." That such descriptors are important is supported by Anderson and Horn who in 1972 concluded that one of the shortcomings of the Colorado Elementary Science Project was the failure to include principals in the implementation scheme (2).

Based on the works of Richard O. Carlson, et al. (3) and Ronald Havelock (4) a team composed of Orlich, Ruff and others (5) attempted to use elementary school change agents to alter teacher styles in social studies and discovered that support by the principal was imperative for the project to succeed. Further, a group of science educators at Washington State University aided in preparing five major Washington school districts to adopt innovative elementary science curriculum between 1970 and 1976. In all cases the elementary school principals participated in the intensive inservice experiences (6): and in all cases the program implementations were successful.

Obtaining information. If principals are to be leaders who help incorporate curricular innovations, they must first have information about such innovations.

While it may be relatively easy to speculate on where principals should get information about innovations, a review of recent literature (1972-1975) provided only partial answers to the question of where principals do get such information. Of the hundreds of articles published since 1972 which concern educational change and innovations, few were empirically based studies, and fewer still dealt even peripherally with the principal's source of information. Most published articles reviewed by us may be grouped into one of three categories:

1. The non-empirical article. ("Wouldn't it be nice if ..."; "I think the principal should ..."; "I offer the following model based on what I think ....")
2. The quasi-empirical case history. ("In the spring of 1973 we began doing ...; we like it; we think everyone should try it.")
3. The almost-empirical study. ("The Innovative Curriculum Project developed 15 ... Evaluation revealed that 7 of the 8 teachers did not use ....")

Although the evaluations in the articles categorized under the third group were often informative, the major development of these articles seemed to be descriptive, not empirical.

The empirical studies which have been reported about principals' sources of information have yielded somewhat surprising results. When several educators were asked by Wolf and Fiorino to name their sources of information about innovations in elementary school mathematics, 9 out of 10 failed to mention national workshops, institutes and special publications concerning the topic, even though all had been recently exposed to one or more of these sources (7). Although further analysis revealed some differences in effectiveness among the various sources, the researchers could not account for the fact that educators apparently did not consider them significant sources. In another study Wolf and Fiorino concluded that the primary source of information leading to educational change must include personal, direct involvement--i.e., educators are influenced by close personal contact over a period of time (8). This conclusion supports a similar result reported by Ruff and Orlich (9)--that in Washington, elementary principals' primary source of information on social studies innovations is the textbook company representative.

As a result of such research, The Biological Science Curriculum Study (BSCS) group incorporated the textbook representative into the dissemination system for the Human Sciences Program (10). Thus, sources which may be considered "external" to the schools are aiding in actual curriculum adoptions.

At least one recently disseminated summary by Ris (11) concluded that teachers, likewise, are affected by the information published by the private sector. Ris wrote that selected public school teachers from all grade levels i.e., 1-12, who attended workshops sponsored by state education agencies in Washington, Idaho and Wyoming most frequently "turn to mass media and/or business sources for information and assistance concerning current events and contemporary problems, e.g., energy, economics and environment" [p. 1].

Methodology

In April, 1975, a questionnaire was mailed to 301 elementary principals in the state of Washington. Thirty-two of these principals had attended National Science Foundation (NSF) sponsored conferences on innovations in elementary social studies and science in 1973 and 1974 at Washington State University. These 32 principals were to be used as a comparison group. The remaining 269 principals were selected randomly from a list provided by the Office of the State Superintendent of Public Instruction in Washington. The list was screened to include only those who could be identified as elementary principals. A sample of approximately 29% was drawn randomly from the list.

A total of 165 usable questionnaires were returned for a response rate of 54.8%. This included 22 (64.7%) respondents who had attended the NSF conferences, and 143 (53.2%) respondents from the non-NSF group. Of the

total sample, 7 (4.2%) had participated in the survey from which Ruff published previously (9).

Five potentially key variables were identified by the investigators in the survey instrument which might affect the respondent's choice of a "best source" of information:

1. The highest degree held by respondent.
2. Size of school district.
3. Number of years respondent had worked in education.
4. Number of years respondent had been an elementary principal.
5. Number of professional trips taken outside of the home school district during each of the four school years between 1971 and 1975.

Analyses of response frequencies were accomplished through the Chi Square technique in contingency tables. The .05 level of significance was chosen by the investigators as being necessary to indicate statistical significance.

Results

Degree status. The results indicated that the variable of highest degree held by a respondent was not a significant factor in distinguishing among respondents. Of the total group, 148 (89.9%) held the M.A. or equivalent, 13 (7.9%) held the B.A. or equivalent, 3 (1.8%) held the doctorate, and 1 (0.6%) answered "Other."

Size of district. District size is significantly related to the number of professionally related trips. In general, the number of trips reported taken outside of the district for professional activities was inversely related to the size of the districts, i.e., the larger the district, the smaller the number of trips reported taken by the principal.

This can be explained by two facts: (1) many of the meetings to which trips were taken were held in larger districts and (2) many of the principals in the smallest districts were also superintendents, and thus attended many meetings not normally attended by principals in larger districts.

A majority of the respondents (61%) was from districts having more than 4,000 students. This fact is consistent with the arrangement of school districts in the state of Washington, as well as nationally, i.e., a small percentage of the districts educate a large percentage of the students. (See Table 1.)

TABLE 1. Respondents Grouped by Size of District*

Size of School Districts by Number of Students

Sample Group	Under 500	501-1,000	1,001-4,000	4,001-10,000	10,000 and more	Totals
Non-NSF	15	15	29	36	48	143
	10.5%	10.5%	20%	25%	34%	100%
NSF	3	2	1	5	11	22
	14%	9%	4%	23%	50%	100%
Totals	18	17	30	41	59	165
	11%	10%	18%	25%	36%	100%

* All percents figured rounded to nearest whole number.

Number of years in education. The vast majority of respondents had worked in the field of education for more than 20 years with 92% of the respondents working in the field for more than 10 years. The NSF group is heavily represented in the 20 years or more category--much more so than is the non-NSF group. But the differences were not statistically significant. (See Table 2.)

TABLE 2. Respondents Grouped by Years in Education*

Sample Group	1-4 Years	5-9 Years	10-14 Years	15-19 Years	20+ Years	Totals
Non-NSF	2 1%	11 8%	27 19%	33 23%	70 49%	143 100%
NSF	0 1%	1 4.5%	4 18%	1 4.5%	16 73%	22 100%
Totals	2 1%	12 7%	31 19%	34 21%	86 52%	165 100%

* All percents rounded to nearest whole number.

Respondents were nearly evenly divided between those who had served fewer than 10 years as elementary principals and those who had served more. The NSF group tended to have somewhat more years of service in the principalship, but the trend was not statistically significant. Table 3 summarizes the responses on this variable.

TABLE 3. Respondents Grouped by Years of Service as an Elementary School Principal*

Sample Group	First Year	1-4 Years	5-9 Years	10-14 Years	15-19 Years	20+ Years	Totals
Non-NSF	9	31	33	30	22	18	143
	6%	22%	23%	21%	15%	13%	100%
NSF	0	4	6	5	3	4	22
	0%	18%	27%	23%	14%	18%	100%
Totals	9	35	39	35	25	22	165
	6%	21%	24%	21%	15%	13%	100%

* All percents rounded to nearest whole number.

Professional trips. The data concerning the number of professional trips taken outside of the home school district were grouped in two ways. Table 4 shows a subdivision of 0, 1, 2, 3, 4 and 10 or more trips during 1974-75 only. Table 5 illustrates the data by response categories. The largest percentage of respondents (18%) took no trips outside their own districts to attend educationally related meetings. Nearly 30% of the respondents took from 1-2 trips, while 51% took 4 or fewer trips.

TABLE 4. Number of Trips Taken Outside District, 1974-75*

Sample Group	Number of Trips					
	0	1	2	3	4	10+
Non-NSF	23 16%	22 15%	22 15%	16 11%	13 9%	18 13%
NSF	7 32%	3 14%	2 9%	5 23%	2 9%	2 9%
Totals	30 18%	25 15%	24 14%	21 13%	15 9%	20 12%

* All percents rounded to nearest whole number.

TABLE 5. Number of Trips Taken Outside of District, 1974-75*

Sample Group	Number of Trips						
	0	1-2	3-5	6-8	9-11	12+	Total
Non-NSF	23 16%	44 31%	38 26%	20 14%	20 7%	8 6%	143 100%
NSF	7 31%	5 23%	7 32%	1 5%	2 9%	0 0%	22 100%
Totals	30 18%	49 30%	45 27%	21 13%	12 7%	8 5%	165 100%

* All percents rounded to nearest whole number.

The data revealed that the NSF respondents tended to report a greater frequency of no trips out of the district than did the other sub-group, but the trend was not statistically significant. One reason for this could be that a larger percentage of the NSF principals came from comparatively larger districts where the professional meetings are usually conducted.

Information was collected on the number of professional trips taken outside the home district for the past four years, but analysis of this variable was based solely on the number of trips reported during 1974-75. Many respondents omitted data for the three previous years requested by the investigators or stated that they could not recall them with any accuracy. Those who provided data seemed to show only minor variations for the four-year period. A comparison of responses from the 1973 and 1974 NSF groups showed some variation but no statistically significant differences on any of the items analyzed. This lead us to conclude that the principals selected to the NSF conferences were probably much more similar to each other than to the non-NSF group.

Those Ubiquitous Sources of Information

The questionnaire asked the respondents to list the "best sources of information" concerning innovations in both elementary school social studies and science programs. Thirteen categories (including "none," or no response) were derived from the free-response answers. The six categories named by at least 10% of the respondents were selected for further analysis. These were:

1. Colleagues--other principals, staff members.
2. Colleges and universities.
3. District resources--curriculum coordinators, curriculum committees.

4. Conferences, meetings, workshops, institutes.

5. Books, journals, magazines, newspapers, films, and TV.

6. Publishers--representatives, ads, displays.

More than 90% (151) of the respondents listed sources of information which could be placed in one or more of the above six categories. The number of citations of best sources of information is summarized in Table 6 for social studies and Table 7 for science.

Social studies innovations. One-half (83) of the respondents listed commercial publishers as a source of information for innovations in elementary school social studies programs. District resources (curriculum coordinators, for example) were cited by 43% of the respondents as a source of information. Books, journals and the like were the third most frequently cited source of information (33%). (See Table 6.)

TABLE 6. Number of Citations for Sources of Information on Innovations in Elementary School Social Studies*

Sample Group	Information Categories: Colleagues	Colleges	District	Conferences	Books and Journals	Publishers
Non-NSF	25 18%	16 11%	64 45%	18 13%	46 32%	70 49%
NSF	3 14%	2 9%	7 32%	5 23%	9 41%	13 59%
Totals	28 17%	18 11%	71 43%	23 14%	55 33%	83 50%

* Percent totals are percent of entire group per item and will not total to 100%.

Both NSF and non-NSF groups cited publishers most frequently. Since the relationship between district size and response to this source of information in social studies was not statistically significant, it seemed unlikely that the difference between the two groups could be explained by the greater proportion of NSF principals from large districts.

The large percentage of respondents listing district resources as a source of information may be in part due to the fact that larger districts tend to have curriculum coordinators or curriculum committees which would not be available in smaller districts. The relationship between district size and this source of information for social studies was significant for the non-NSF group. This finding is relevant and shows a change from the Ruff-Orlich report of 1974 (9). In 1975 there was a greater reporting of reliance on district resources. The NSF group listed this source less often than did non-NSF principals (32% vs 45%), but the difference cannot be explained by the data collected.

The data reveal two other noteworthy trends. The NSF group cited conferences and workshops more frequently than did the non-NSF group (23% vs 13%). The NSF respondents tended to list journals and other publications more frequently than did non-NSF respondents (41% vs 32%). However, the differences were not statistically significant.

One variable that tended to favor the NSF principal group was their selection to attend the NSF sponsored Administrators' Conferences in 1973 and 1974. Two basic criteria were used for participant selection: (1) evidence that the principal was an instructional leader as demonstrated by innovations in the respective schools, and (2) willingness to conduct an awareness conference "back home" after the NSF conference. Thus, the

broad category of "instructional leader" could be claimed by the NSF conference attendees.

Science innovations. The responses to the question concerning the best sources of information about elementary science innovations were similar to those for social studies for the non-NSF group. (See Table 7.) For the NSF group, however, the percentage of respondents listing conferences as a source of information rose from 23% to 68%, a stastistically significant difference.

TABLE 7. Number of Citations for Sources of Information on Innovations in Elementary School Science*

Sample Group	Information Categories					
	Colleagues	Colleges	District	Conferences	Books and Journals	Publishers
Non-NSF	24 17%	17 12%	63 44%	19 13%	36 25%	64 45%
NSF	2 9%	3 14%	6 27%	15 68%	8 36%	8 36%
Totals	26 16%	20 12%	69 42%	34 21%	44 27%	72 44%

* Percents are per item, thus will not total to 100%.

Of the 12 possible categories (six for social studies, six for sciences) only conferences for science showed a significant difference between NSF and non-NSF groups. The rise in the number of citations of conferences for the NSF group can be explained by the fact that these respondents had indeed attended conferences and reported this attendance on an open-ended form. This result indicates--at least for these respondents--that the NSF-sponsored workshops were effective mechanisms in providing new information sources about innovations in science.

In addition to the change for conferences, the NSF group reported a large (but not quite statistically significant) change in the percentage of respondents who listed publishers as a best source of information. For social studies 59% of the NSF group listed publishers, but for science, the response dropped to 36%. We would speculate that those attending NSF-sponsored conferences had gained additional new knowledge sources.

Size of district vs. listing publishers as a source of information. There was a significant relationship between district size and listing publishers as a source of information for science, but not for social studies. Those in medium-sized districts had a significant tendency to list publishers as a source of information for both science and for social studies. There was a slight tendency for those in larger districts (10,001 or more students) not to list publishers as a source of information for science but not social studies.

We cannot explain the difference between the listing of publishers as sources of information for science and for social studies. One possible explanation is that principals are more comfortable with their own knowledge of social studies and are thus less likely to rely on outsiders (publishers) for their information.

The tendency for those in large districts not to list publishers may be attributable to the fact that those large districts usually have curriculum coordinators who give the information to the principals. There is no ready explanation for the tendency of those in medium-sized districts to list publishers as a source of information more frequently than, say, the smallest districts.

Conclusions

From this study we make the following conclusions:

1. Publishers were still the single most frequently mentioned "best source" of information for the principals who responded to the survey. This tends to support the conclusions of Ruff and Orlich (9) and Wolf and Fiorino (8).
2. Curriculum coordinators and other district resources were important sources of information especially for principals residing in comparatively larger districts.
3. Professional literature (books, journals and magazines) were important sources of information for the respondents.
4. Conferences and workshops, especially those sponsored by NSF, were identified as important sources of information for those who participated in them.

It was the purpose of this study to identify what changes, if any, had occurred since the original survey on sources of information about curriculum innovation had been published in 1974 (9). As is noted from this replication not much change has occurred since the original questionnaire. Indeed, elementary school principals still list the publishing industry and their representatives as the best source for curriculum and instructional information about social studies and science. The only notable departure was from those individuals who had participated in NSF administrator conferences. This could be construed to mean that these kinds of workshops can serve as effective models for the dissemination of educational information.

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12. This study was made possible by a special research grant awarded to the authors in 1975 by George B. Brain, Dean, College of Education at Washington State University.

APPENDIX A

COVER LETTER TO PRINCIPALS

WASHINGTON STATE UNIVERSITY

PULLMAN, WASHINGTON 99163

DEPARTMENT OF EDUCATION

April, 1975

Dear Principal:

You have been randomly selected (lucky you!) from a listing of elementary school principals in the state of Washington to participate in a survey concerning information sources about new curriculum developments. The study is designed to gather information pertaining to selected programs and school curricula of elementary school social studies and elementary school sciences.

This survey is being conducted under the auspices of the College of Education at Washington State University and with the cooperation of Washington's Office of the State Superintendent of Public Instruction. Data collected from the survey will be used as one means to suggest dissemination and implementation designs which will be mutually beneficial to all educators in the state.

All individual responses to the questionnaire will be confidential and all participants will remain anonymous. Information in summary form will be available upon request.

Your participation in this study will greatly aid our knowledge and understanding of information sources available to public school educators. We thank you for your consideration in this matter and urge you to complete and return the rather short questionnaire at your earliest convenience--by May 15, 1975, if possible.

A stamped, self-addressed envelope is enclosed for the return of your completed instrument.

Respectfully submitted,

Thomas P. Ruff
Associate Professor of Education

Donald C. Orlich
Professor of Education

DCO:ts

Enclosure

APPENDIX B

SURVEY INSTRUMENT USED IN 1975

QUESTIONNAIRE ON SOURCES OF INFORMATION

Items 1 through 5 may be answered by placing a (✓) mark in the appropriate space. Kindly check only one response in each of the first five questions.

1. What is the approximate total student enrollment in your school district?

   ( ) under 500 students

   ( ) 501-1000 students

   ( ) 1001-4000 students

   ( ) 4001-10,000 students

   ( ) 10,001 or more students

2. How many years, including 1974-75, have you worked in the field of education?

   ( ) 1 to 4 years

   ( ) 5 to 9 years

   ( ) 10 to 14 years

   ( ) 15 to 19 years

   ( ) 20 years or over

3. How many years, including 1974-75, have you been an elementary school principal?

   ( ) first year

   ( ) 2 to 4 years

   ( ) 5 to 9 years

   ( ) 10 to 14 years

   ( ) 15 to 19 years

   ( ) 20 years or over

4. What is your highest academic degree?

( ) Less than a B.A.

( ) B.A. or B.S.

( ) M.A., M.Ed., M.S., or other Masters

( ) Ed.D. or Ph.D.

( ) Other (Please specify) _____

5. In 1970, a survey similar to this was conducted by Washington State University. Did you participate in that study?

( ) Yes

( ) No

( ) Do not remember

Questionnaire items 6 through 11 will require some specific data. Please jot down the requested information in the spaces provided. Your most candid responses are requested.

6. About how many trips did you take out of your present school district to attend educationally related meetings for each of the following four school years? Answer only for those in present district.

Number of Trips	School Year
____	1974-75
____	1973-74
____	1972-73
____	1971-72

7. Please list those professionally related regional, state or national meetings which you attended during the last two years, i.e., 1973-74 and 1974-75.

8. Please list all of your best sources of information on new developments in elementary school social studies.

9. What do you believe are the major strengths and weaknesses of your current elementary school social studies program?

Strengths	Weaknesses

10. Please list all of your best sources of information on new developments in elementary school science.

11. What do you believe are the major strengths and weaknesses of your current elementary school science program?

Strengths	Weaknesses

If you desire a summary of this study, please send us a post card with your name, address, city and zip. Simply ask for a copy of the "1975 School Principal Sources of Information Study."

APPENDIX C

QUESTIONNAIRE FORMATS

The instrument used to collect data for this study was an open response questionnaire. (See Appendix B.) After data were collected, tabulated and analyzed, it became apparent that a forced-response instrument might yield more discrete data which could be tested with greater confidence statistically. Further, a forced-response questionnaire would reduce the needed, but subjective, classifications by which to interpret the responses.

A decision was made by the investigators to prepare two separate instruments for possible future research: one for sources of social studies and an identical one for science programs. These, yet untested instruments, are included in Appendices D and E.

We would like to suggest that these instruments be administered at state-wide meetings of elementary school principals. Too, with only minor modifications these model instruments could be used for all levels of social studies and science programs, K-12.

APPENDIX D

SUGGESTED INSTRUMENT FOR SOCIAL STUDIES INFORMATION

QUESTIONNAIRE ON SOURCES OF INFORMATION

For items 1-5, place a check mark (✓) in the appropriate space; please check only one answer for each question.

1. What is the approximate total student enrollment in your school district?

   1. ( ) under 500 students
   2. ( ) 501-1000 students
   3. ( ) 1001-4000 students
   4. ( ) 4001-10,000 students
   5. ( ) 10,001 or more students

2. How many years, including 1975-76, have you worked in the field of education?

   1. ( ) 1-4 years
   2. ( ) 5-9 years
   3. ( ) 10-14 years
   4. ( ) 15-19 years
   5. ( ) 20 or more years

3. How many years, including 1975-76, have you been an elementary school principal?

   1. ( ) first year
   2. ( ) 2-4 years
   3. ( ) 5-9 years
   4. ( ) 10-14 years
   5. ( ) 15-19 years
   6. ( ) 20 or more years

4. About how many trips did you take out of your present school district to attend educationally related meetings during 1974-75?

   1. ( ) None
   2. ( ) 1-3 trips
   3. ( ) 4-6 trips
   4. ( ) 7-9 trips
   5. ( ) 10 or more trips

5. How does this compare to the number of trips taken in previous years?

1. ( ) More than in previous years
2. ( ) About the same
3. ( ) Fewer than in previous years

For items 6-19, rate each source of information by circling the appropriate number under each description.

TO WHAT EXTENT DO YOU USE EACH OF THE FOLLOWING AS A SOURCE OF INFORMATION ABOUT NEW DEVELOPMENTS IN ELEMENTARY SCHOOL SOCIAL STUDIES?

	Utilize very frequently	Utilize somewhat frequently	Utilize somewhat infrequently	Utilize very infrequently	Do not utilize
6. Books, journals, films, TV	1	2	3	4	5
7. Colleagues (staff, other principals)	1	2	3	4	5
8. College or university faculty or projects	1	2	3	4	5
9. Professionally sponsored conferences, meetings workshops	1	2	3	4	5
10. District resources (curriculum coordinators or committees)	1	2	3	4	5
11. Publishers (salespeople, displays, ads, brochures)	1	2	3	4	5
12. Sponsored dissemination projects, e.g., NSF, State Superintendent Conferences	1	2	3	4	5

HOW RELIABLE DO YOU FIND EACH OF THE FOLLOWING AS A SOURCE OF INFORMATION ABOUT NEW DEVELOPMENTS IN ELEMENTARY SCHOOL SOCIAL STUDIES?

	Highly reliable	Somewhat reliable	Neither reliable nor unreliable	Somewhat unreliable	Very unreliable
13. Books, journals, films, TV	1	2	3	4	5
14. Colleagues (staff, other principals)	1	2	3	4	5
15. College or university faculty or projects	1	2	3	4	5
16. Professionally sponsored conferences, meetings, workshops	1	2	3	4	5
17. District resources (curriculum coordinators or committees)	1	2	3	4	5
18. Publishers (salespeople, displays, ads, brochures)	1	2	3	4	5
19. Sponsored dissemination projects, e.g., NSF or State Superintendent Conferences	1	2	3	4	5

The topics in items 20-59 were identified as strengths and/or weaknesses in elementary school social studies programs by a group of elementary principals. The items are paired--i.e., the question on the right-hand side of the page pertains to the topic on the left-hand side. Please answer each item as it pertains to your program by placing a check (✓) by the appropriate number.

20. Professional preparation of teachers in the social studies area is

1. ( ) Excellent
2. ( ) Good
3. ( ) Adequate
4. ( ) Less than adequate
5. ( ) Poor

21. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

---

22. Classroom performance of teachers in the social studies area is

1. ( ) Excellent
2. ( ) Good
3. ( ) Adequate
4. ( ) Less than adequate
5. ( ) Poor

23. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

---

24. The social studies textbook we use is

1. ( ) Very up-to-date
2. ( ) Mostly up-to-date
3. ( ) Mostly out-of-date
4. ( ) Very out-of-date
5. ( ) Not used

25. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

---

26. Supplementary materials that we use in social studies are

1. ( ) Very up-to-date
2. ( ) Mostly up-to-date
3. ( ) Mostly out-of-date
4. ( ) Very out-of-date
5. ( ) Not used

27. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

28. Most students seem to find the social studies materials to be

1. ( ) Very interesting
2. ( ) Somewhat interesting
3. ( ) Neutral
4. ( ) Somewhat dull
5. ( ) Very dull

29. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

---

30. For most students, the reading level of the social studies materials is

1. ( ) Too difficult
2. ( ) About right
3. ( ) Too easy

31. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

---

32. How much variety is offered by supplementary materials in social studies?

1. ( ) Much variety
2. ( ) Some variety
3. ( ) Little variety
4. ( ) No variety
5. ( ) Materials not existent or not available

33. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

---

34. Supplementary materials in social studies are

1. ( ) Readily available without difficulty
2. ( ) Usually available with little difficulty
3. ( ) Available with some difficulty
4. ( ) Usually unavailable, except with great difficulty
5. ( ) Impossible to obtain

35. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

36. Compared with the dollar costs of other social studies programs, this program is

1. ( ) More expensive
2. ( ) About the same cost
3. ( ) Less expensive

37. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

---

38. Compared with the dollar costs of other segments of the curriculum, the social studies program is

1. ( ) More expensive
2. ( ) About the same cost
3. ( ) Less expensive

39. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

---

40. Compared with the classroom time required for other social studies programs, this program requires

1. ( ) More time
2. ( ) About the same amount
3. ( ) Less time

41. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

---

42. Compared with the classroom time required for other segments of the curriculum, the social studies program requires

1. ( ) More time
2. ( ) About the same amount
3. ( ) Less time

43. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

---

44. The social studies program is

1. ( ) Highly flexible
2. ( ) Moderately flexible
3. ( ) Highly inflexible

44. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

46. The social studies program allows for individualization to a

1. ( ) High degree
2. ( ) Moderate degree
3. ( ) Low degree

47. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

---

48. In the social studies program, how much emphasis is placed on basic skills?

1. ( ) All the emphasis
2. ( ) Most of the emphasis
3. ( ) About half of the emphasis
4. ( ) Little of the emphasis
5. ( ) None of the emphasis

49. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

---

50. In the social studies program, how much emphasis is placed on acquiring concepts?

1. ( ) All the emphasis
2. ( ) Most of the emphasis
3. ( ) About half the emphasis
4. ( ) Little of the emphasis
5. ( ) None of the emphasis

51. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

---

52. In the social studies program, how much emphasis is placed on developing processes?

1. ( ) All the emphasis
2. ( ) Most of the emphasis
3. ( ) About half the emphasis
4. ( ) Little of the emphasis
5. ( ) None of the emphasis

53. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

54. The amount of reading required in the social studies program is

1. ( ) Too little
2. ( ) About right
3. ( ) Too much

55. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

---

56. The amount of discussion required in the social studies program is

1. ( ) Too little
2. ( ) About right
2. ( ) Too much

57. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

---

58. The amount of individual participation or individual activity required in the social studies program is

1. ( ) Too little
2. ( ) About right
3. ( ) Too much

59. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

APPENDIX E

SUGGESTED INSTRUMENT FOR SCIENCE INFORMATION

QUESTIONNAIRE ON SOURCES OF INFORMATION

For items 1-5, place a check mark (✓) in the appropriate space; please check only one answer for each question.

1. What is the approximate total student enrollment in your school district?
   1. ( ) under 500 students
   2. ( ) 501-1000 students
   3. ( ) 1001-4000 students
   4. ( ) 4001-10,000 students
   5. ( ) 10,001 or more students

2. How many years, including 1975-76, have you worked in the field of education?
   1. ( ) 1-4 years
   2. ( ) 5-9 years
   3. ( ) 10-14 years
   4. ( ) 15-19 years
   5. ( ) 20 or more years

3. How many years, including 1975-76, have you been an elementary school principal?
   1. ( ) first year
   2. ( ) 2-4 years
   3. ( ) 5-9 years
   4. ( ) 10-14 years
   5. ( ) 15-19 years
   6. ( ) 20 or more years

4. About how many trips did you take out of your present school district to attend educationally related meetings during 1974-75?
   1. ( ) None
   2. ( ) 1-3 trips
   3. ( ) 4-6 trips
   4. ( ) 7-9 trips
   5. ( ) 10 or more trips

5. How does this compare to the number of trips taken in previous years?
   1. ( ) More than in previous years
   2. ( ) About the same
   3. ( ) Fewer than in previous years

For items 6-19, rate each source of information by circling the appropriate number under each description.

TO WHAT EXTENT DO YOU USE EACH OF THE FOLLOWING AS A SOURCE OF INFORMATION ABOUT NEW DEVELOPMENTS IN ELEMENTARY SCHOOL SCIENCE?

	Utilize very frequently	Utilize somewhat frequently	Utilize somewhat infrequently	Utilize very infrequently	Do not utilize
6. Books, journals, films, TV	1	2	3	4	5
7. Colleagues (staff, other principals)	1	2	3	4	5
8. College or university faculty or projects	1	2	3	4	5
9. Professionally sponsored conferences, meetings, workshops	1	2	3	4	5
10. District resources (curriculum coordinators or committees)	1	2	3	4	5
11. Publishers (salespeople, displays, ads, brochures)	1	2	3	4	5
12. Sponsored dissemination projects, e.g., NSF or State Superintendent Conferences	1	2	3	4	5

HOW RELIABLE DO YOU FIND EACH OF THE FOLLOWING AS A SOURCE OF INFORMATION ABOUT NEW DEVELOPMENTS IN ELEMENTARY SCHOOL SCIENCE?

	Highly reliable	Somewhat reliable	Neither reliable nor unreliable	Somewhat unreliable	Very unreliable
13. Books, journals, films, TV	1	2	3	4	5
14. Colleagues (staff, other principals)	1	2	3	4	5
15. College or university faculty or projects	1	2	3	4	5
16. Professionally sponsored conferences, meetings, workshops, institutes	1	2	3	4	5
17. District resources (curriculum coordinators or committees)	1	2	3	4	5
18. Publishers (salespeople, displays, ads, brochures)	1	2	3	4	5
19. Sponsored dissemination projects, e.g., NSF or State Superintendent Conferences	1	2	3	4	5

The topics in items 20-59 were identified as strengths and/or weaknesses in elementary school science programs by a group of elementary principals. The items are paired--i.e., the question on the right-hand side of the page pertains to the topic on the left-hand side. Please answer each item as it pertains to your program by placing a check (✓) by the appropriate number.

20. Professional preparation of teachers in the science area is

1. ( ) Excellent
2. ( ) Good
3. ( ) Adequate
4. ( ) Less than adequate
5. ( ) Poor

21. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

---

22. Classroom performance of teachers in the science area is

1. ( ) Excellent
2. ( ) Good
3. ( ) Adequate
4. ( ) Less than adequate
5. ( ) Poor

23. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

---

24. The science textbook we use is

1. ( ) Very up-to-date
2. ( ) Mostly up-to-date
3. ( ) Mostly out-of-date
4. ( ) Very out-of-date
5. ( ) Not used

25 I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

---

26. Supplementary materials that we use in science are

1. ( ) Very up-to-date
2. ( ) Mostly up-to-date
3. ( ) Mostly out-of-date
4. ( ) Very out-of-date
5. ( ) Not used

27. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

28. Most students seem to find the science materials to be

1. ( ) Very interesting
2. ( ) Somewhat interesting
3. ( ) Neutral
4. ( ) Somewhat dull
5. ( ) Very dull

29. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

---

30. For most students, the reading level of the science materials is

1. ( ) Too difficult
2. ( ) About right
3. ( ) Too easy

31. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

---

32. How much variety is offered by supplementary materials in science?

1. ( ) Much variety
2. ( ) Some variety
3. ( ) Little variety
4. ( ) No variety
5. ( ) Materials not existent or not available

33. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

---

34. Supplementary materials in science are

1. ( ) Readily available without difficulty
2. ( ) Usually available with little difficulty
3. ( ) Available with some difficulty
4. ( ) Usually unavailable, except with great difficulty
5. ( ) Impossible to obtain

35. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

36. Compared with the dollar costs of other science programs, this program is

1. ( ) More expensive
2. ( ) About the same cost
3. ( ) Less expensive

37. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

---

38. Compared with the dollar costs of other segments of the curriculum, the science program is

1. ( ) More expensive
2. ( ) About the same cost
3. ( ) Less expensive

39. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

---

40. Compared with the classroom time required for other science programs, this program requires

1. ( ) More time
2. ( ) About the same amount
3. ( ) Less time

41. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

---

42. Compared with the classroom time required for other segments of the curriculum, the science program requires

1. ( ) More time
2. ( ) About the same amount
3. ( ) Less time

43. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

---

44. The science program is

1. ( ) Highly flexible
2. ( ) Moderately flexible
3. ( ) Highly flexible

45. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

46. The science program allows for individualization to a

1. ( ) High degree
2. ( ) Moderate degree
3. ( ) Low degree

47. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

---

48. In the science program, how much emphasis is placed on basic skills?

1. ( ) All the emphasis
2. ( ) Most of the emphasis
3. ( ) About half of the emphasis
4. ( ) Little of the emphasis
5. ( ) None of the emphasis

49. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

---

50. In the science program, how much emphasis is placed on acquiring concepts?

1. ( ) All the emphasis
2. ( ) Most of the emphasis
3. ( ) About half of the emphasis
4. ( ) Little of the emphasis
5. ( ) None of the emphasis

51. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

---

52. In the science program, how much emphasis is placed on developing processes?

1. ( ) All the emphasis
2. ( ) Most of the emphasis
3. ( ) About half of the emphasis
4. ( ) Little of the emphasis
5. ( ) None of the emphasis

53. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

54. The amount of reading required in the science program is

1. ( ) Too little
2. ( ) About right
3. ( ) Too much

55. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

---

56. The amount of discussion required in the science program is

1. ( ) Too little
2. ( ) About right
3. ( ) Too much

57. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness

---

58. The amount of individual participation or individual activity required in the science program is

1. ( ) Too little
2. ( ) About right
3. ( ) Too much

59. I consider this to be a

1. ( ) Major strength
2. ( ) Minor strength
3. ( ) Neither strength nor weakness
4. ( ) Minor weakness
5. ( ) Major weakness